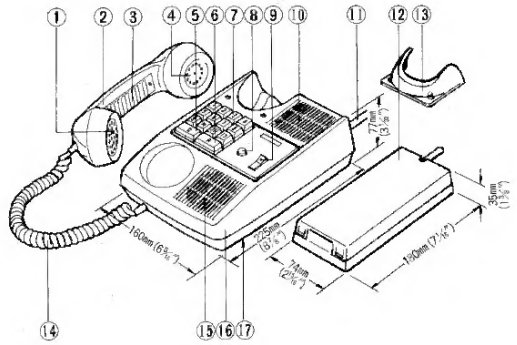
SPEAKER PHONE INTERCOM

MODELS: TS-6K(6way)
TS-12K(12way)

— INSTRUCTIONS —

CONTROLS & FUNCTIONS



① Handset microphone
② Handset
③ Directory card
④ Handset speaker
⑤ Call button
⑥ Paging button
⑦ Station selector buttons
⑧ Door release button
⑨ Privacy switch for loudspeaking microphone
⑩ Loudspeaker
⑪ Terminal cord
⑫ Terminal box
⑬ Receiver cradle for wall mounting
⑭ Coil cord
⑮ Loudspeaking microphone
⑯ Case
⑰ Volume control

SPECIFICATIONS

* Power source:	DC 12 volt. Use PS-12S (PS-12C in North America) AC adaptor.
* Current consumption:	150 mA maximum.
* Calling:	Push button station selection. A single stroke chime sounds when call button is depressed.
* Loudspeaking output:	200 mW maximum.
* Paging:	Use PG-U paging adaptor in conjunction with Aiphone paging amplifier: PG-A or PG-B and speakers (or with PG-3 and a 8 ohm horn speaker).
* Desk paging:	Use desk paging adaptor PG-K with PG-U and paging amplifier. Output is approx. 300 mW per station.
* Wiring:	Up to 24 conductors may be required. Please refer to wiring diagram showing system that meets your requirements.

FEATURES

* Combination telephone and loudspeaking function. Either telephone conversation using handset at both stations or hands free communication at receiving station is included.
* Up to 13 stations can be connected in a system.
* 1 channel common talk system. Conference calls can selectively include up to 13 stations.
* Paging system can be added using PG-U adaptor connected to Aiphone paging amplifier: PG-A or PG-B. Desk paging (allows page message to be transmitted through loudspeaker at selected masters) is also available using PG-K adaptor.
* Designed for either desk use or wall mounting.
* Privacy switch for loudspeaking microphone prevents monitoring or eavesdropping by another master while in privacy position.
* Volume controls for loudspeaker and tone call.

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* Door opener button can be used for remote control of door release. Other remote functions such as switching on outside lights etc., can be accomplished using a proper relay.
* Excellent voice fidelity.
* Door station IB-DA, etc. can be installed with adaptor DS-B. (Up to two door stations may be connected to up to 4 masters.)
* Block paging and talkback paging is available when using PA-B adaptor.

INSTALLATION

Do not attempt to install your intercom system until you have read and thoroughly understood the installation procedure. Aiphone's warranty is void if system is installed in a manner other than described in this manual.

WIRING

Lay out your system in advance. Determine the exact location of each station.

We recommend a full complement of wire be installed, even though you may not initially be installing the maximum number of stations available for your system. This way, should you decide to add a station later, you can avoid running additional cables to existing stations. Do not connect wires to terminals CS, ED, or P3 unless appropriate equipment is used. Speaker phone will not operate if these wires are connected parallel through system.

A maximum of 24 conductors is required for the TS-12K. A maximum of 18 conductors is required for the TS-6K.

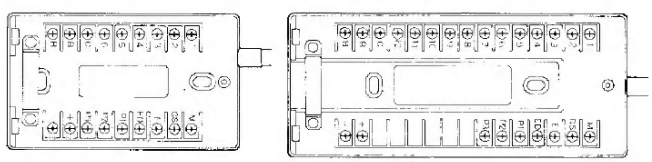
Refer to the chart below and select the proper wire gauge to meet your requirements.

AWG WIRE SIZE	24 AWG	22 AWG	20 AWG	18 AWG
DISTANCE	550'	700'	775'	875'
DIAMETER OF WIRE	0.5 mm	0.65 mm	0.8 mm	1.0 mm
DISTANCE	200 m	250 m	280 m	320 m

Begin your installation with station #1. A space is provided at the left of the diagram to write in your color code. Note the position of the C terminal at each station. Be sure you wire each station correctly.

After installing your second station we recommend that the power supply be connected to the + and – terminal lines at a convenient location and that a test be made for calling and talking between each station. As each additional station is installed retest between each station. Unplug power supply while making wiring connections.

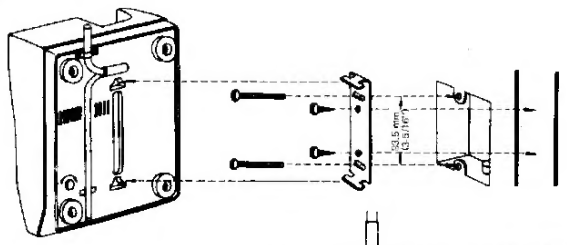
ACTUAL TS-12K STATION TERMINAL LOCATION:



(1) – (12) : for connecting relative stations.
(+) , (–) : for power supply.
(M) : for talking and to be connected in common.
(C) : for receiving call and talking.
(CS) , (E) : for accessory functions added to system at later date.
(ED) : for connecting door station.
(P1) , (P2) , (P3) : for paging connection.
(B) , (B) : for door release or other remote control.

INSTALLATION FOR WALL MOUNTING

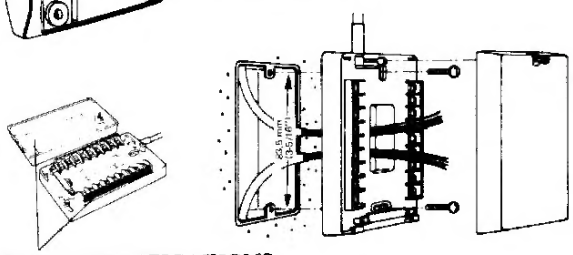
1) Attacb the mounting bracket to wall or single gang plaster ring.
2) Remove the rubber feet from base of station.
3) Attach the handset cradle with supplied screws.



INSTALLATION OF TERMINAL BOX

(Can be mounted easily to wall or single gang box.)

1) Remove a screw and cover as shown.
2) Attach bottom case to wall or single gang box.
3) Wire terminals and replace cover.



TERMINAL IDENTIFICATIONS

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EQUIPMENT AVAILABLE FOR USE WITH YOUR TS-K SPEAKER-PHONE

TS-6K: 6 call master station. Up to 7 masters may be connected.

TS-12K: 12 call master station. Up to 13 masters may be connected.

DS-B: Adaptor for door station.

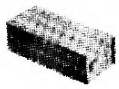
IB-DA: Door station. Please see below for other types of door stations.

EL-9S: Electric door release. Requires separate transformer.

PA-B: Talkback paging and/or block paging adaptor.

PG-K: Desk paging adaptor. Allows page to be heard through all other connected stations. Must be used in conjunction with paging amplifier.

PS-12C: CSA & UL approved power supply (available only in North America).



PS-12S: Power supply for system. Available everywhere except in North America.

SP-3: Paging speaker. Complete and ready to install including round flush mounting frame. Transformer installed for 70V line operation. (Either N-S, square frame or N-E, round frame is available for SP-3 installation).

PG-U TYPE A: Paging adaptor for connecting any amplifier and background music source to your TS-K system. Features paging volume, treble & bass controls and automatic background music cut out.

RY-P: Relay for local speaker cut out. Local speaker cut out eliminates the chance of feed back if a paging speaker is located near station initiating page.

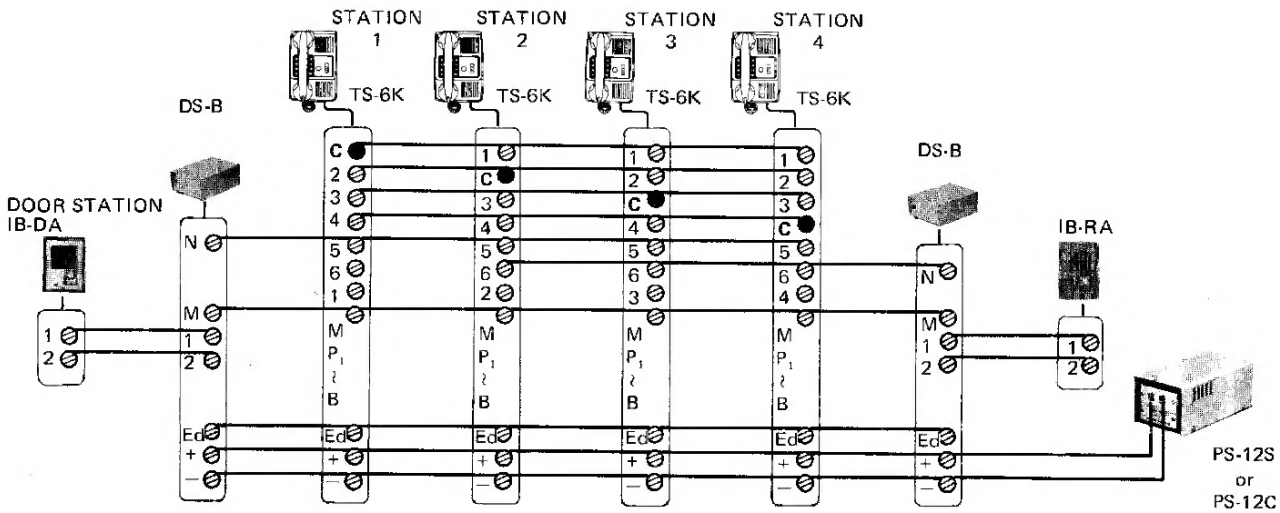
PG-3: 3-watt paging amplifier.

PG-10A, PG-30A, PG-60A: UL & CSA approved paging amplifier. 10W, 30W, 60W.

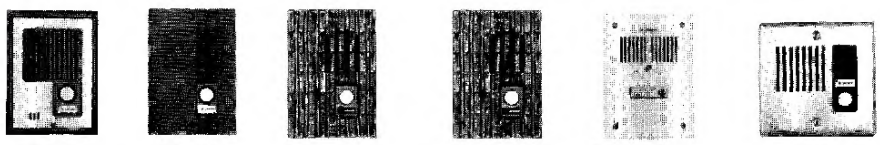
PG-10B, PG-30B, PG-60B: Standard paging amplifier. 10W, 30W, 60W.

TS-K SYSTEM WITH TWO DOOR STATIONS CONNECTED

Maximum of 2 door stations per system. Each door station may be connected to up to 4 masters.



NOTE: Please select the most suitable door station from your application from the IB-series door stations (IB-FY not available in U.S.A.).



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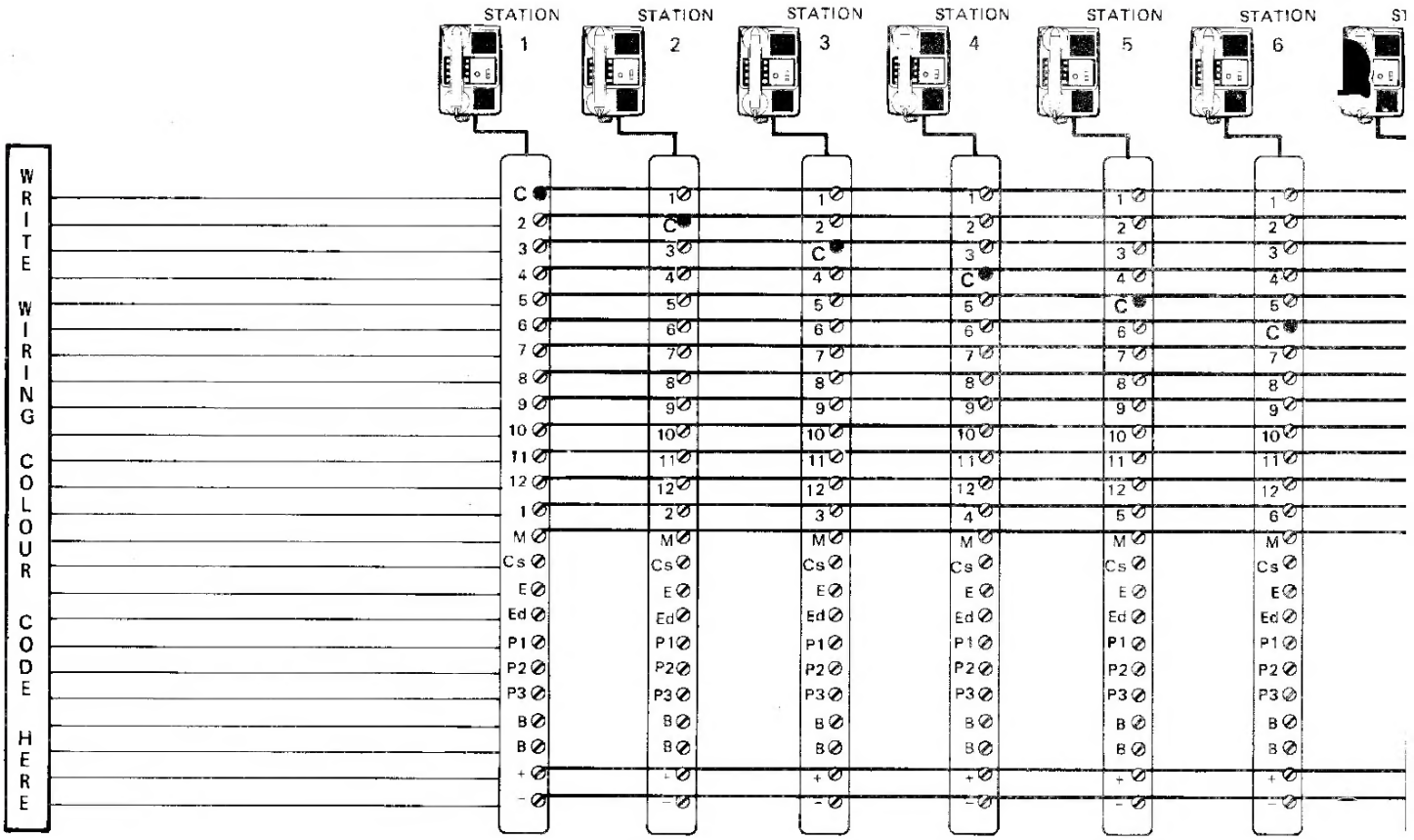
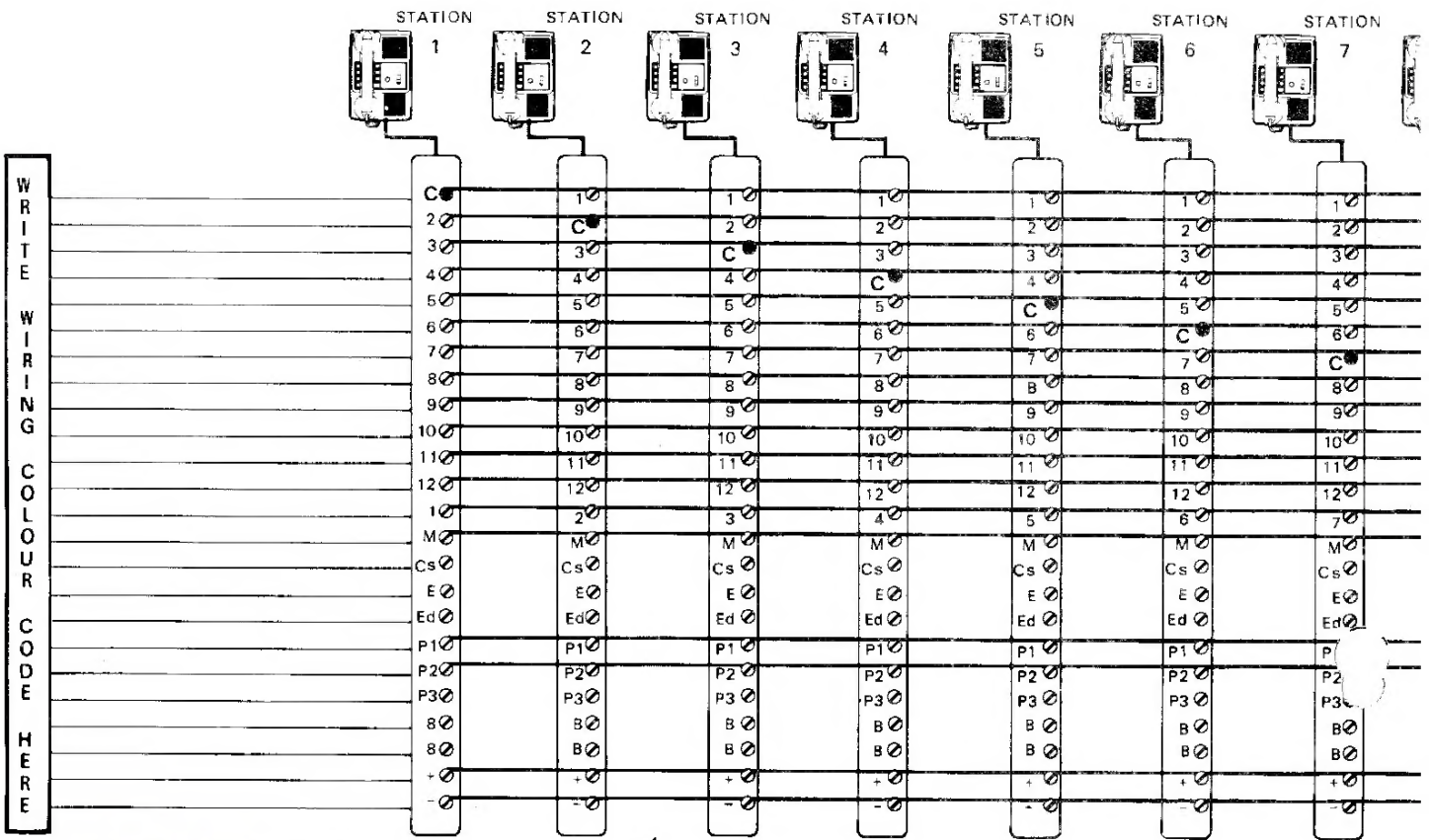


TS-K ALL MASTER SYSTEM W



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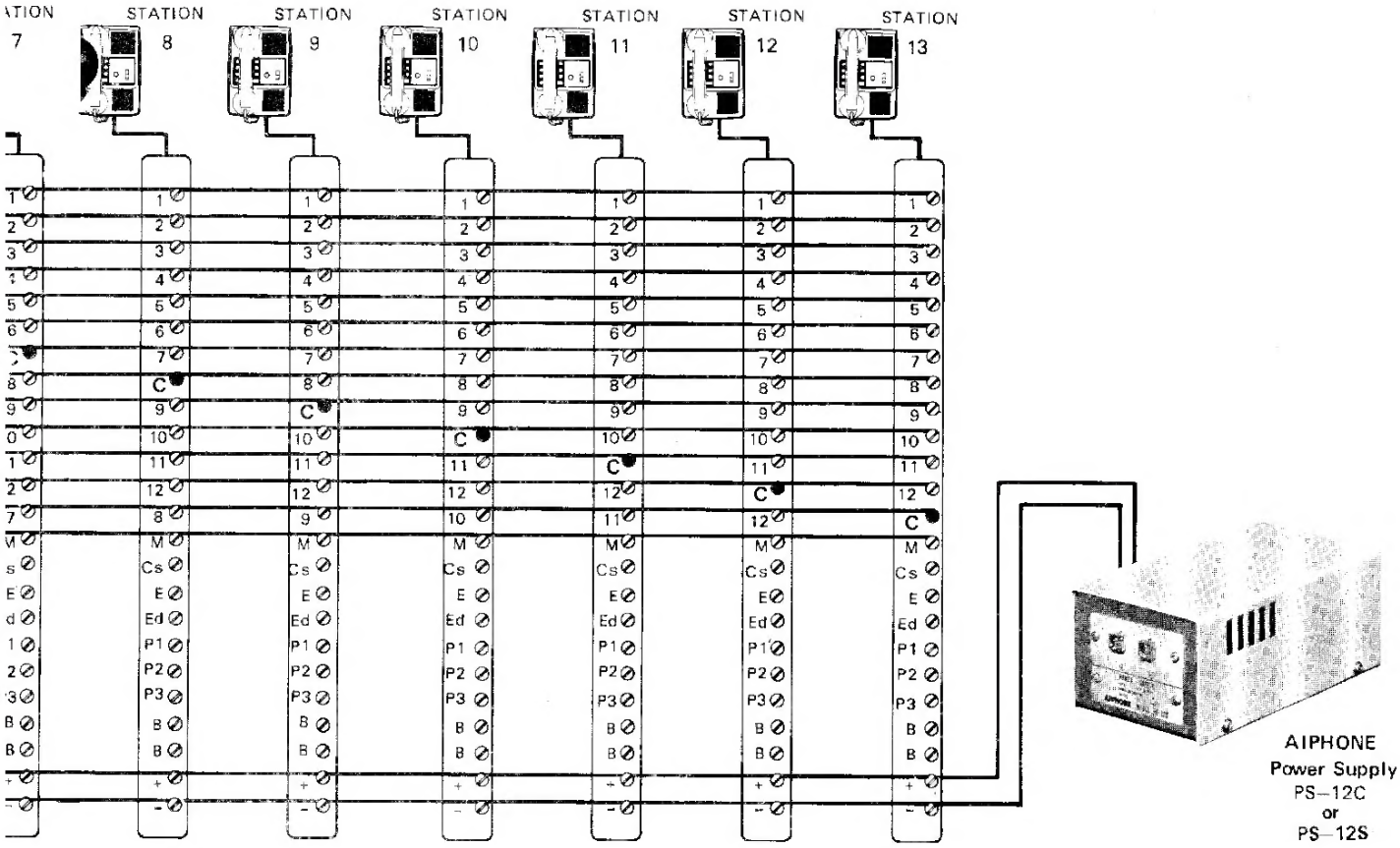
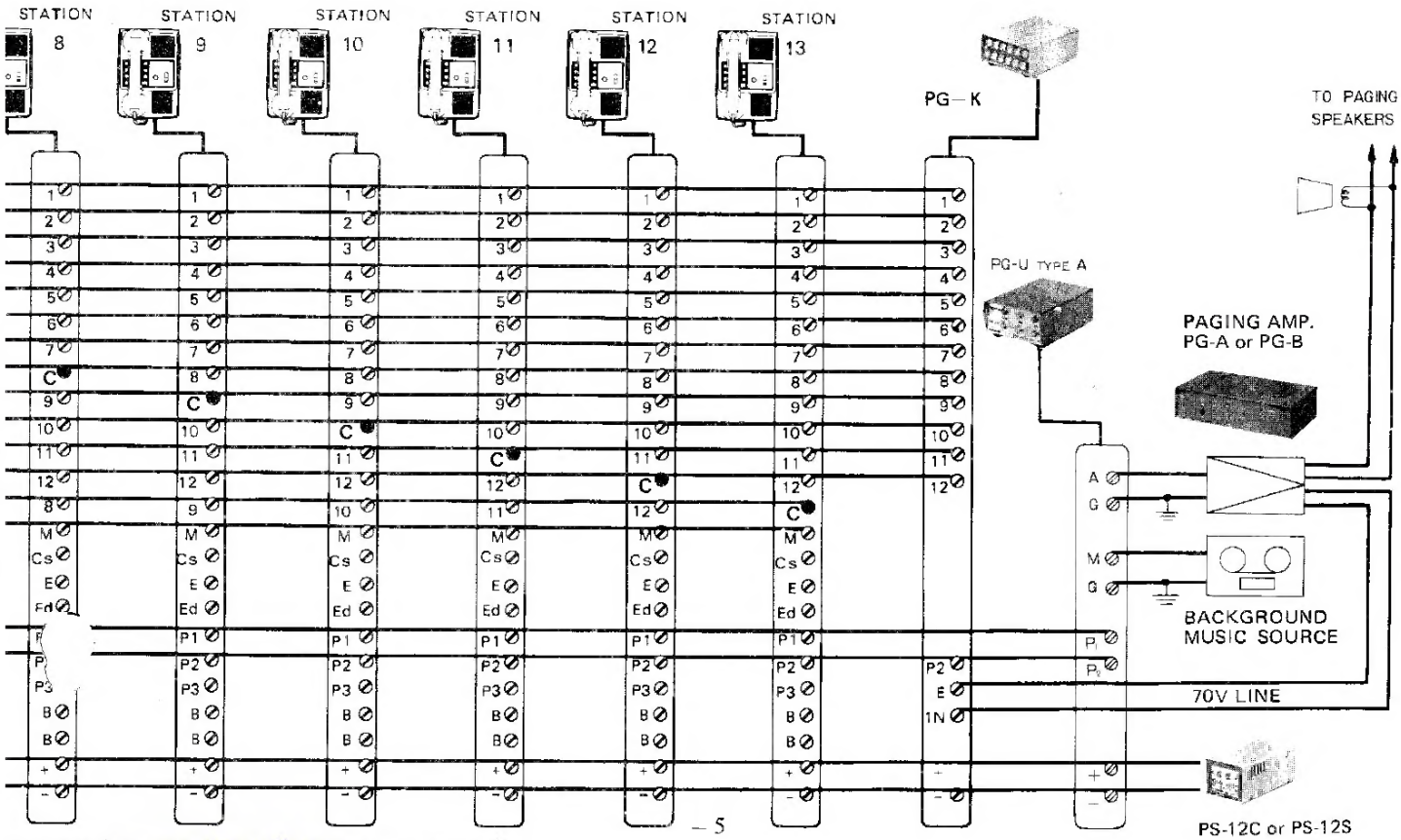


ith PAGING and DESK PAGING



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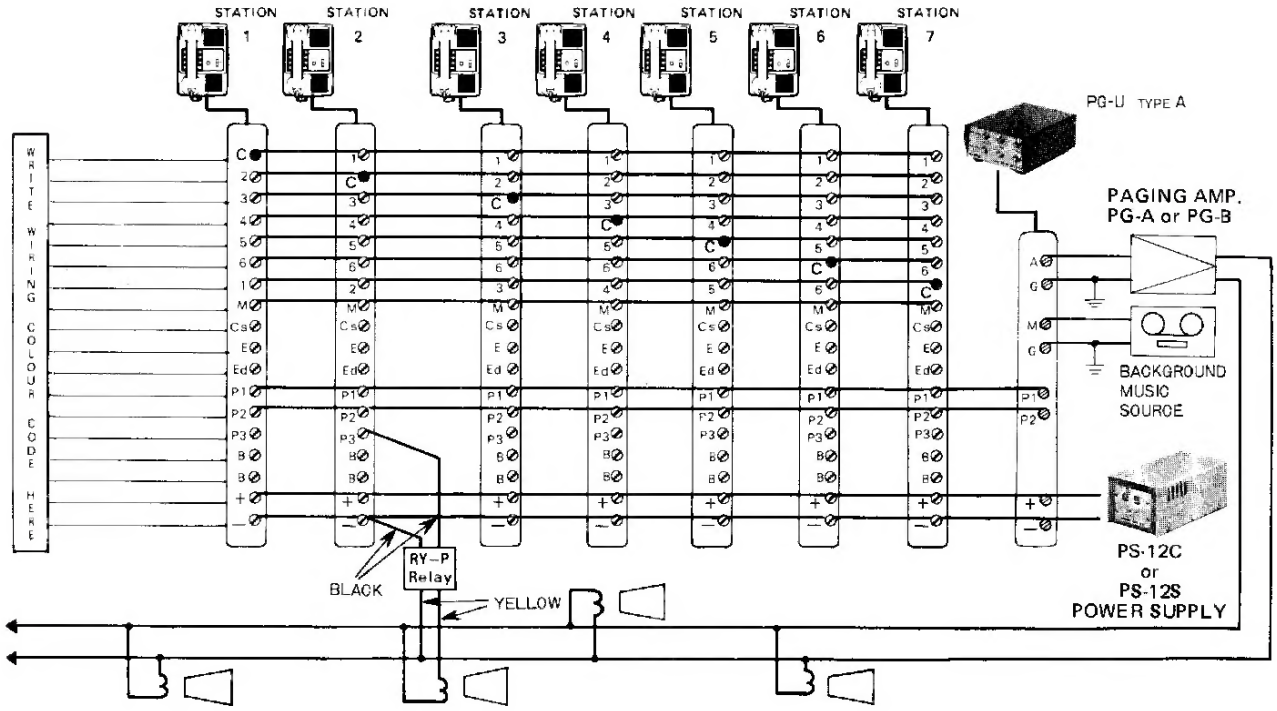
ALL MASTER INTERCOM SYSTEM WITH PAGING AND LOCAL SPEAKER CUTOUT



PAGING WIRING REQUIREMENTS:

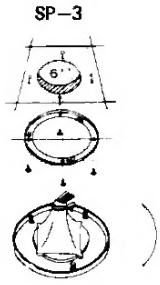
a) 4 wires between PG-U and TS-K stations.
b) 5 common wires plus number of installed stations between TS-K stations.
c) A single pair of wires between PG-U and amplifier.
d) A single pair of wires between PG-U and background music source.
e) Paging speaker line must be run separately from station wires.

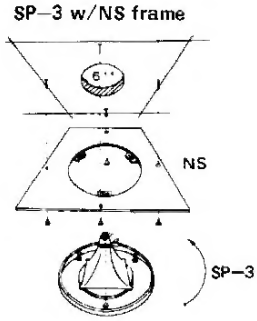
TO CUT OUT LOCAL SPEAKER DURING PAGING OPERATION

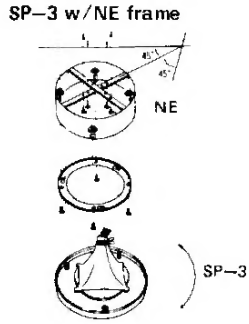
Install relay RY-P between local speaker and TS-K station as shown with No. 2 station in the above wiring diagram. Local speaker cut out eliminates the chance of feedback if paging speaker is located near station initiating page. (Yellow wires from RY-P connect to paging speaker.) RY-P must be located at the speaker.

INSTALLING PAGING SPEAKERS

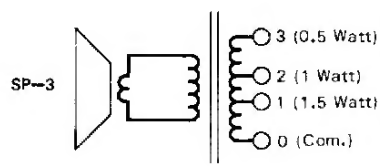
1) For ceiling or wall mounting, cut hole according to type of speaker chosen.
2) Install mounting hardware with screws provided. For mounting on concrete or other hard surface use suitable anchors for attaching mounting frame.
3) Connect single pair of twisted wires to Paging amplifier.
4) Attach speaker to mounting frame by inserting studs into slots of mounting frame, aligning red arrow on baffle with red screw and turning baffle clockwise until properly locked.







TRANSFORMER TERMINAL LOCATION ON SP-3



Note: Aiphone SP-3 comes complete with baffle and mounted transformer.

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Wire paging speakers referring to the table shown below. Total output of speakers must not be more than the rated output of the paging amplifier used.

	RATED TRANS-FORMER OUTPUT	TERMINAL CONNECTION	SPEAKER OUTPUT 70.7V LINE	SPEAKER OUTPUT 100V LINE
SP-3	1.5 watts (70.7V LINE) 3 watts (100V LINE)	0 – 3 (10K ohms)	0.5 watt	1 watt
		0 – 2 (5K ohms)	1 watt	2 watt
		0 – 1 (3.3K ohms)	1.5 watt	3 watt

* Desk paging system can be added to an existing paging system by installing the PG-K adaptor, allowing paging announcement to be heard through both paging speakers and loudspeakers of stations (desk paging).

* Output for desk paging is 300 mW per station, so if 10 stations are connected for desk paging, 3 watts total is required. In this example, 3 watts must be deducted from the total output of the paging amplifier used.

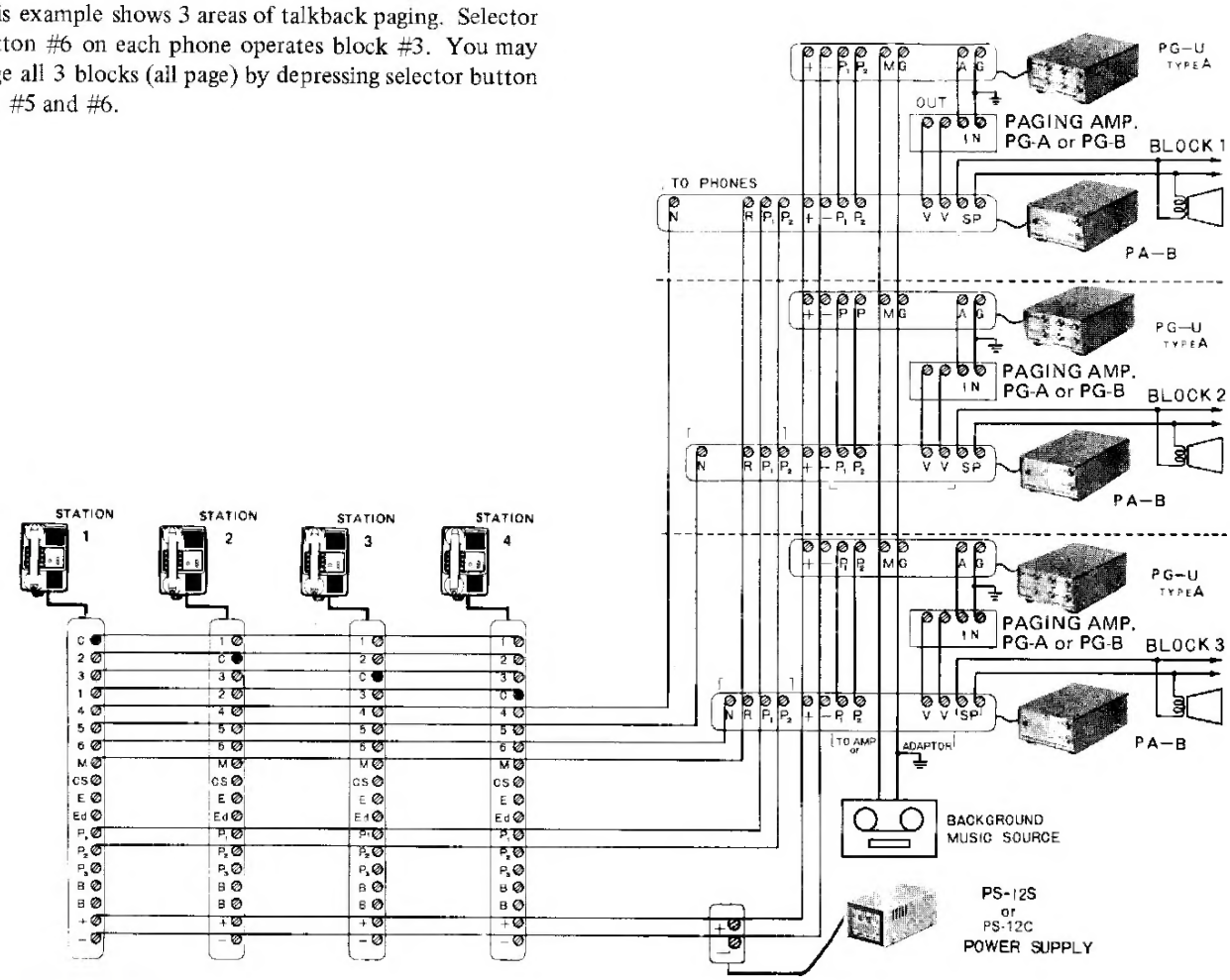
Example: Paging Amplifier 30 watt
Less 3 watt consumed by desk paging.
27 watt available for balance of paging system.

TS-K SPEAKER-PHONE SYSTEM WITH TALKBACK PAGING, ZONE PAGING, OR BOTH EQUIPMENT REQUIREMENTS

1) TS-K system consists of TS-6K or TS-12K speaker phone powered by PS-12C or PS-12S power supply. PG-K desk paging adaptor can also be installed. However, PG-K can not be wired for talkback paging.
2) One PG-U TYPE A, one PA-B, one paging amplifier with either 70 volt or 100V line and output of less than 50 watt RMS, and appropriate paging speakers are required for each talkback zone.
   a. If PA-B is installed for zone paging without talkback, amplifier is not limited to 50 watts.

For the full information, please refer to PA-B instruction sheet.

This example shows 3 areas of talkback paging. Selector button #6 on each phone operates block #3. You may page all 3 blocks (all page) by depressing selector button #4, #5 and #6.



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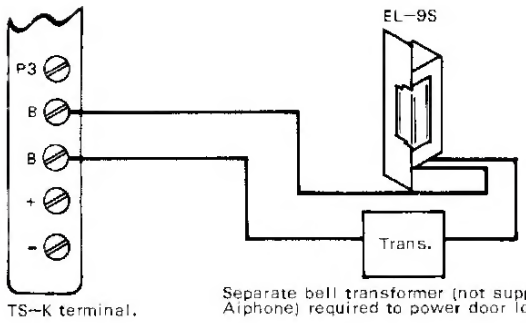
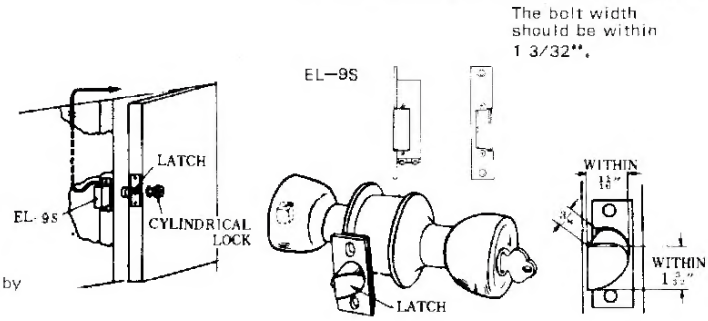
WIRING DOOR RELEASE EL-9S (Locked door is released by pushing door opener button on TS-K master station).



AVAILABLE CYLINDRICAL LOCKS



OPERATION

* Calling:
  Pick up the handset and depress the selector button of desired station, then depress call button or call by direct voice.
* Receiving:
  An incoming call is announced by a single stroke chime or by voice.
  A reply can be made privately by using handset or hands free by using open voice speaker.
  Volume control for loudspeaker is located on base of each master station.
* Monitoring:
  Depress the selector button of desired station. Any master can monitor any other station if the selected station is not in privacy position.

PAGING OPERATION

* Pick up the handset and make announcement pushing the paging button. Release paging button after completing announcement. Background music will automatically cut out during paging operation.

CLEANING YOUR INTERCOM STATIONS

* Your Aiphone intercom stations may be cleaned with a soft cloth dampened with household cleanser, such as Mr. Clean or Fantastik.

***

We at AIPHONE are proud of our products. Our designers and engineers strive to bring you the finest in communication equipment. Each item has been carefully tested and inspected before leaving our factory. Properly installed and used, your Aiphone intercom system should give years of trouble-free service.

We are pleased to offer the following warranty:

WARRANTY

Aiphone warrants its products to be free from defects of material and workmanship under normal use and service for a period of one year after delivery to the ultimate user and will repair free of charge or replace at no charge, should it become defective upon which examination shall disclose to be defective and under warranty. Aiphone reserves unto itself the sole right to make the final decision whether there is a defect in materials and/or workmanship; and whether or not the product is within the warranty.

This warranty shall not apply to any Aiphone product which has been subject to misuse, neglect, accident, or to use in violation of instructions furnished, nor extended to units which have been repaired or altered outside of the factory.

This warranty does not cover batteries or damage caused by batteries used in connection with the product.

This warranty covers bench repairs only, and any repairs must be made at the shop or place designated in writing by Aiphone. Aiphone will not be responsible for any costs incurred involving on site service calls.

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Aiphone Corporation, Bellevue, Washington
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